



Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet 1 of 2 Sheets

**Complete if Known**

Application Number	10/795,838
Filing Date	03/08/2004
First Named Inventor	Randolph P. Thummel
Group Art Unit	1624
Examiner Name	
Attorney Docket Number	UNIH-0001 (109293.00003)

**OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
CA	1.	ALONSO-VANTE, N.; Jean-Francois, N.; Sauvage, J.-P. "Spectral Sensitization of Large-band-gap semiconductors (Thin Films and Ceramics) by a Carboxylated Bis(1-10-Phenanthroline)copper(I) Complex," <i>J. Chem. Soc., Dalton Trans.</i> 1994, pp. 1649-1654.	
CA	2.	ARGAZZI, R.; Bignozzi, C. A.; Heimer, T. A.; Castellano, F. N.; Meyer, G. "Enhanced Spectral Sensitivity from Ruthenium(II) Polypyridyl Based Photovoltaic Devices," <i>J. Inorg. Chem.</i> 1994, vol. 33, pp. 5741-5759.	
CA	3.	ARMAROLI, N. "Photoactive mono- and polynuclear Cu(I)-phenanthrolines. A viable alternative to Ru(II)-polypyridines?," <i>Chem. Soc. Rev.</i> 2001, vol. 30, pp. 113-124.	
CA	4.	BELEY, M.; Bignozzi, C.-A.; Kirsch, G.; Alebbi, M.; Raboin, J.-C. "New ruthenium bisterpyridinyl complexes, as efficient sensitizers of nanocrystalline, TiO <sub>2</sub> films," <i>Inorganica Chimica Acta</i> 2000, vol. 318, pp. 197-200.	
CA	5.	BIGNOZZI, C. A.; Argazzi, R.; Kleverlaan, C. J. "Molecular and supramolecular sensitization of nanocrystalline wide band-gap semiconductors with mononuclear and polynuclear metal complexes," <i>Chem. Soc. Rev.</i> 2000, vol. 29, pp. 87-96.	
CA	6.	HAGFELDT, A.; Grätzel, M. "Molecular Photovoltaics," <i>Acc. Chem. Res.</i> 2000, vol. 33, pp. 269-277.	
CA	7.	HARA, K.; Sugihara, H.; Singh, L. P.; Islam, A.; Katoh, R.; Yanagida, M.; Sayama, K.; Murata, S.; Arakawa, H. "New Ru(II) phenanthroline complex photosensitizers having different number of carboxyl groups for dye-sensitized solar cells," <i>Journal of Photochemistry and Photobiology A: Chemistry</i> 2001, vol. 145, pp. 117-122.	
CA	8.	HARA, K.; Sugihara, H.; Tachibana, Y.; Islam, A.; Yanagida, M.; Sayama, K.; Arakawa, H. "Dye-Sensitized Nanocrystalline TiO <sub>2</sub> Solar Cells Based on Ruthenium(II) Phenanthroline Complex Photosensitizers," <i>Langmuir</i> 2001, vol. 17, pp. 5992-5999.	
CA	9.	HARA, K.; Horiuchi, H.; Katoh, R.; Singh, L. P.; Sugihara, H.; Sayama, K.; Murata, S.; Tachiya, M.; Arakawa, H. "Effect of the Ligand Structure on the Efficiency of Electron Injection from Exited Ru-Phenanthroline Complexes to Nanocrystalline TiO <sub>2</sub> Films," <i>J. Phys. Chem. B</i> 2002, vol. 106, pp. 374-379.	
CA	10.	ISLAM, A.; Sugihara, H.; Singh, L. P.; Hara, K.; Katoh, R.; Nagawa, Y.; Yanagida, M.; Takahashi, Y.; Murata, S.; Arakawa, H. "Synthesis and photophysical properties of ruthenium(II) charge transfer sensitizers containing 4,4'-dicarboxy-2,2'-biquinoline and 5,8-dicarboxy-6,7-dihydro-dibenzo[1,10]-phenanthroline," <i>Inorganica Chimica Acta</i> 2001, vol. 322, pp. 7-16.	

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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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CA	11.	KALYANASUNDARAM, K.; Grätzel, M. "Applications of functionalized transition metal complexes in photonic and optoelectronic devices," <i>Coordination Chemistry Reviews</i> 1998, vol. 77, pp. 347-414.	
CA	12.	KELLY, C. A.; Meyer, G. J. "Excited state processes at sensitized nanocrystalline thin film semiconductor interfaces," <i>Coordination Chemistry Reviews</i> 2001, vol. 211, pp. 295-315.	
CA	13.	NAZEERUDDIN, M. K.; Kay, A.; Rodicio, I.; Humphry-Baker, R.; Müller, E.; Liska, P.; Vlachopoulos, N.; Grätzel, M. "Conversion of Light to Electricity by <i>cis</i> -X <sub>2</sub> Bis(2,2'-bipyridyl-4,4'-dicarboxylate)ruthenium(II) Charge-Transfer Sensitizers (X= Cl <sup>-</sup> , Br <sup>-</sup> , I <sup>-</sup> , CN <sup>-</sup> , and SCN <sup>-</sup> ) on Nanocrystalline TiO <sub>2</sub> Electrodes," <i>J. Am. Chem. Soc.</i> 1993, vol. 115, pp. 6382-90.	
CA	14.	NAZEERUDDIN, M. K.; Péchy, P.; Renouard, T.; Zakeeruddin, S. M.; Humphry-Baker, R.; Comte, P.; Liska, P.; Cevey, L.; Costa, E.; Shklover, V.; Leone, S.; Deacon, G. B.; Bignozzi, C. A.; Grätzel, M. "Engineering of Efficient Panchromatic Sensitizers for Nanocrystalline TiO <sub>2</sub> -Based Solar Cells," <i>J. Am. Chem. Soc.</i> 2001, vol. 123, pp. 1613-1624.	
CA	15.	SAKAKI, S.; Kuroki, T.; Hamada, T. "Synthesis of a new copper(I) complex, [Cu(tmcbpy = 4,4',6,6'-tetramethyl-2,2'-bipyridine-5,5'-dicarboxylic acid), and its application to solar cells," <i>J. Chem. Soc., Dalton Trans.</i> 2002, pp. 840-842.	
CA	16.	SCHWARZ, O.; van Loyen, D.; Jockusch, S.; Turro, N. J.; Dürr, H. "Preparation and application of new ruthenium(II) polypyridyl complexes as sensitizers for nanocrystalline TiO <sub>2</sub> ," <i>Journal of Photochemistry and Photobiology A: Chemistry</i> 2000, vol. 132, pp. 91-98.	
CA	17.	YANAGIDA, M.; Islam, A.; Tachibana, Y.; Fujihashi, G.; Katoh, R.; Sugihara, H.; Arakawa, H. "Dye-sensitized solar cells based on nanocrystalline TiO <sub>2</sub> sensitized with a novel pyridylquinoline ruthenium(II) complex," <i>New J. Chem.</i> 2002, vol. 26, pp. 963-965.	
CA	18.	ZAKEERUDDIN, S. M.; Nazeeruddin, M. K.; Humphry-Baker, R.; Grätzel, M. "Stepwise Assembly of Tris-Heteroleptic Polypyridyl Complexes of Ruthenium(II)," <i>Inorg. Chem.</i> 1998, vol. 37, pp. 5251-5259.	
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